Prevalence of Vitamin D3 deficiency among patients undergoing angioplasty in a tertiary care centre in Eastern India

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Background: The prevalence of Vitamin D3 deficiency and its relationship with clinical parameters in patients undergoing angioplasty, i.e. the higher risk group, in Eastern India is not known. The present study aimed to address this issue.
Methods: 241 consecutive patients (212 male and 29 females) undergoing PTCA in a tertiary care centre were enrolled in the study. Blood samples for Vitamin D levels were collected along with routine pre-catheterization blood samples. Vitamin D levels were stratified as per Institute of Medicine (IOM) guidelines into normal (<30 ng/ml), insufficiency (21-29 ng/ml) and deficiency (<20ng/ml). All these patients underwent 2D echocardiogram as a part of pre catheterization workup and were divided into tertiles on the basis of EF (Ejection fraction) as <30%, 30-50% and >50%.The above data was analyzed with commercially available statistical software. Level of significance was assessed with Chi square test. A p value of <0.05 was considered significant.
Results: Of 241 patients 152(63.07%) were deficient, 40(16.59%) were insufficient and 51(21.16%) had normal Vitamin D3 levels. The group with deficiency had highest number of patients with acute coronary syndrome (n=39), ejection fraction <30% (n=74; p<0.05) and triple vessel disease (n=6) .We did not find any significant correlation between age, gender, lipid levels, presence or absence of hypertension, diabetes, smoking or alcoholism.
Conclusion: In this tertiary care centre of Eastern India majority of patients undergoing PTCA had vitamin D3 deficiency. The Vitamin D3 deficient group had significant number of patients with EF<30% and showed a tendency towards higher number of ACS (Acute Coronary Syndrome) and triple vessel disease on coronary angiograms.

Association of mortality with years of education in patients with ST-segment elevation myocardial infarction treated with fibrinolysis

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Background: Although previous work has evaluated the relationship of SES with CHD and the risk of myocardial infarction (MI), few studies have isolated the association between social class and risk of MI from the relationship of social class with outcomes after the occurrence of this event(1).In addition, the vast majority of research in this area has reflected single-country or regional experiences, predominantly involving populations in the United States or Scandinavian countries (2).The purpose of this study was to examine the association between lower socioeconomic status (SES), as ascertained by years of education, and outcomes in patients with acute ST-segment elevation myocardial infarction (STEMI).For the purpose of this study, the patient's level of education, defined as years of completed education or level of education attained—a generally acceptable and widely used surrogate of SES(3)- was used as a measure of this parameter.
Methods: We evaluated 326 patients with STEMI admitted in the LTMG Hospital, Mumbai from jan13- may14 &those receiving fibrinolytic therapy.Patients presenting after 24hrs of onset, associated CNS complications at presentation, those who have lost follow up were excluded from the study. Data on demographics, baseline characteristics, and medical therapies during hospitalization and at discharge, invasive procedure use, in-hospital adverse clinical events, and 7-day and 1-year mortality were collected prospectively.
Results: Of the 326 participants in this study, 19.8% had completed 6 years of school, 61.6% had completed high school (or equivalent), and 14.4% had between 10 and 14 years of education; the remaining 4.4% had 14 years of education.One-year mortality was inversely related to years of education and was 5-fold higher in patients with 6 years compared with those with 14 years of education (17.5% vs. 6.6%, p 0.0001). Nonetheless, years of education remained an independentcorrelate of mortality at day 7 (hazard ratio per year of increase in education: 0.86; 95% confidence interval: 0.83 to 0.88) and also between day 8 and 1 year (hazard ratio per year of increase in education: 0.96; 95% confidence interval: 0.94 to 0.98), even after adjustment for baseline characteristics.

Table: Clinical outcomes by years of education.

Yrs of education	<6	6–10	10–14	>14	P value
N (%)	64(19.8)	200(61.6)	47(14.4)	15(4.4)	
Reinfarction (%)	3(4.6)	8(4)	2(4.2)	1(6.6)	0.0002
CHF (%)	13(20.3)	32(16)	7(14.8)	2(13.7)	<0.0001
24Hrs mortality (%)	4(6.25)	2(1)	1(2.1)	0(0)	<0.0001
7day mortality (%)	7(10.93)	7(3.5)	2(4.2)	1(6.6)	<0.0001
1yr mortality (%)	11(17.5)	15(7.8)	2(4.2)	1(6.6)	<0.0001

Conclusions: When the number of years of education was used as a measure of SES, there was an inverse relationship such that significantly higher short-term and 1-year mortality existed beyond that accounted for by baseline clinical variables. Future studies should account for and investigate the behavioral, social, biological, and physiological mechanisms underlying this link between SES and cardiovascular disease outcomes.

Is there any analytical bias in determining the association between ABO Blood group and coronary artery disease

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Background: Previous studies regarding the association between ABO blood groups and risk of coronary heart disease (CHD) have been inconsistent. We aimed to investigate the associations between ABO blood group and angiographically significant coronary artery disease from a tertiary care referral hospital from south India.
Methods: Retrospective analysis of 708 patient's records who underwent coronary angiogram between July 2013 to December 2013 at a tertiary care hospital from South India were included in this study. Patients were grouped into angiography positive (AGP) (N=387), angiography negative (AGN) (N=321) based on coronary angiogram. Patients with normal coronary angiogram and those with mild disease were grouped under AGN, and those requiring revascularization either by PCI or Coronary artery bypass grafting